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## ABSTRACT

The process by which four separate school districts implemented collaborative research to examine and improve their inservice training for teachers of bilingual students is presented. The sites were in a major far west city, a small southwestern town with a Mexican-American majority, a large southeastern school district, and two neighboring districts in the northeast. The four programs were federally funded for one year and involved teams composed of a teacher, a researcher, and a trainer/developer researching techniques and strategies of inservice training to develop into active programs. A first conclusion from the four projects reported on was that readiness within the district for such an effort was a fundamental factor in the program's success. A second conclusion was that the collaborative research process progressed in three stages requiring clearly defined researcher behavior: (1) orientation and discussion of the school's collective needs; (2) a period of consolidation, focusing on the similarities of needs across programs and developing a research design and instruments in keeping with the practitioners' frame of reference; and (3) data collection and verification, leading to design and evaluation of the final inservice plan. It was also found that teacher participation in the research design process contributed to the project's success, and that the projects were an important professional development process for the teachers involved. It is suggested that rather than label and separate the native language, standard English, and bilingual efforts, the district group them all under the rubric, "language transitioning." (MSE)

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# Collaborative Research and Inservice Education for Teachers of Students with Limited English Proficiency

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COLLABORATIVE RESEARCH  
AND  
INSERVICE EDUCATION FOR TEACHERS  
OF  
STUDENTS WITH LIMITED ENGLISH PROFICIENCY

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September 1983

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## PREFACE

The increasing number of students in our schools with limited understanding of English presents a challenge to American educators. Nowhere is the challenge more deeply felt than at the local school district level. Socio-linguistic issues, as well as complex teaching concerns, make the bilingual education teacher's daily task exceedingly difficult. An inservice program that ensures the continuous training of these teachers is a vital necessity in school districts with large numbers of bilingual students. But, in some cases, teachers consider their district's inservice program to be less than useful and somewhat removed from the realities of their daily struggle. Consequently, there has been an attempt in some areas to involve classroom teachers actively in examining and improving their training programs. This has led to teachers and researchers working together to design and carry out the research necessary to develop effective staff training programs. Joint research brings practitioners and researchers together to inquire as a team into questions important to classroom teachers.

This monograph reveals the process by which four disparate school districts implemented collaborative research to examine and improve their inservice training programs for teachers of bilingual students. Evidence from previously funded studies indicates that teachers are as interested in the process of teacher conducted research as in the products resulting from that research. We believe that while the four districts benefitted from this research by developing inservice programs directly related to their local problems, other districts can benefit by seeing how they used collaborative research to improve their inservice programs.

We are pleased to share the work of some highly dedicated teachers, administrators, and researchers. It is through efforts such as these, that educational programs of high quality will be made available to all Americans.



Dr. Manuel J. Justiz, Director  
National Institute of Education

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## I. INTRODUCTION

### The Need of Inservice Training for Teachers of Students With Limited English Proficiency

Bilingual education is an innovation to help children of limited English proficiency (LEP) gain full access to the benefits of American Education. It is estimated that over five million school-age children come from homes where a language other than English is spoken (Compendium, NIE, 1980). Deficiencies in speaking and writing English have retarded the academic progress of LEP students. Their achievement decreases with each grade, often with disastrous effects. So total has been the failure of traditional public school programs for Hispanics that they are often described as the most undereducated group of Americans. The drop-out rate for Hispanics is disproportionate to those children from homes where English is the primary language. As of 1979, only 42.3 percent of Hispanics, 25 years old and over had completed four years of high school as compared with 70.3 percent of the majority population (Fact sheet, NFIE, July 1982).

An important handicap to LEP students is the scarcity of teachers trained to meet the special needs of Hispanic children. It is estimated that 42,000 public elementary and secondary teachers use a language other than English for all or some parts of their teaching time (Dominguez, 1979).

The need to provide viable staff development programs for teachers of LEP students has been well documented for more than a decade (U.S. Commission on Civil Rights, 1973-75; National Advisory Council on Bilingual Education, 1975-76). In 1977, the Rand Corporation reported that lack of trained staff was an important factor in the quality of bilingual education at the local level (Berman, et al., 1977). By some accounts the problem is becoming more acute; Secretary Bell recently said before a Senate subcommittee that lack of an adequate supply of trained teaching staff was the "greatest problem in implementing bilingual programs" (Teacher Ed Reports, April 29, 1982).

The National Institute of Education (NIE) was keenly interested in testing the idea that inservice programs for teachers of LEP students could be strengthened by locally conducted research on instructional problems specific to each locality. In 1980, the NIE solicited proposals for research directed toward the development of inservice programs for teachers of LEP students. The applicants were told to examine bilingual instruction in their schools and to develop plans for inservice staff development that would ameliorate inadequacies in grade levels K-12.

The support for the actual inservice activities was not to come from project funds, but would be financed by the Local Education Agency (LEA). Individual LEA's would benefit from this funding by the opportunity to develop inservice programs which would be directly relevant to their own

problems. An important premise of the NIE was that other school districts would also benefit, not so much from site-specific approaches or "models" developed by the awardees, but from a careful documentation of the strengths and weaknesses of the process used in conducting the research and developing inservice activities.

It was expected that while there would be issues common to all districts, i.e., the need to improve English comprehension to enable LEP students to compete in "standard" education programs, needs would differ substantially from district to district, depending on such factors as size, location, and diversity of the English-speaking populations. A fundamental requirement of the RFP was that, although a variety of research approaches were accepted, all were to be based on a collaboration between researchers and practitioners. Ultimately, four proposals were selected for award. They were from diverse school districts and presented different research designs.

#### School Sites

One site, located in a major city in the far west, has a large enrollment of LEP students who are widely different in their ethnic, linguistic, and previous educational backgrounds. Because of the use of mandatory testing of language proficiency, this local education agency was faced with a need for a better analysis of its bilingual program, particularly in the area of diagnosis of student needs and subsequent prescription of instructional activities. ➤

A second project is located in a small town in the Southwest, where approximately, 60 percent of the population is Mexican-American. The 1970 census showed that 84 percent of the Mexican Americans in the community who are 25 or older never completed high school. The teachers of LEP students here have a wide range of backgrounds, but a high proportion of teachers is relatively new to bilingual education. The school district identified two primary impediments: recruitment of bilingual teachers and the need for improved inservice education for existing teachers.

The third site selected for funding was a large school district in the Southeast. It is mostly an urban LEA which, however, encompasses 27 municipalities and townships, but it also include a large unincorporated area that ranges from urbanized to agricultural communities. It serves a diversity of ethnic and racial groups. In 1979-80, over 13,000 students of limited English proficiency were enrolled in this district. The purpose of the project in this site was to bring researchers from a nearby university together with practitioners to identify effective procedures in teaching reading of English to LEP students.

The fourth locale encompasses two neighboring school districts in the Northeast. One of the districts serves over 10,000 LEP students. The other serves approximately six hundred LEP students in grades K-8. In the latter district, more than 55 percent of the bilingual population is Portuguese. A major influence on these two districts has been court-ordered integration of children of varying socio-economic levels, new staff assignments, and programmatic changes that have resulted in some school communities. The primary focus of the study in this site was on the



process by which children are prepared for transition from bilingual programs to standard English classrooms, since there are presently no specific and comprehensive criteria regarding when and how this transition should be made.

These four projects were funded for one year, each to engage in research leading directly to the development of improved teacher inservice programs. In addition, the research was to be planned and carried out so that teachers in each site would be actively involved as much as possible in all phases of the research effort. Finally, at the end of their work, the projects were asked to identify important issues which they felt were in need of further research.

### Collaborative Research

Traditionally, research on the improvement of education has been carried out using a method commonly known as "linear strategy." The term linear refers to the presupposition inherent in this strategy that educational innovation, or change, is the end product of a series of activities occurring in succession: research--development--dissemination--adoption. Research is carried out by knowledgeable persons of one end of the continuum, "researchers," and adoption of products or techniques is done by those at the opposite pole, "practitioners. Thus, in the linear method, teachers assume a passive role in research and development (R&D). They are often asked to implement the products of R&D, but are rarely invited to become involved in the process of school renewal right from the start.

In the 60's, when there was intense interest in educational reform, Clark and Guba strongly advocated the linear approach to educational R&D (Clark and Guba, 1967). In subsequent years, however, it became apparent that the linear strategy was not very productive. Some sound products and techniques were developed; but, in the main, they were not finding their way into the classroom, and those which did, were often out-moded, for there is considerable lag between innovation and implementation.

Most recently, a number of school research efforts have moved away from the linear model and attempted to involve classroom teachers and other practitioners in the R&D process. At this juncture, prior to examining the unfolding of the four bilingual inservice projects it will be useful to focus our attention on a few collaborative R&D strategies.

### Interactive Research and Development on Teaching (IR&DT)

A seminal piece of work, grounded in the concepts of collaboration, was the Interactive Research and Development on Teaching (IR&DT) project designed and carried out by Tikunuff, Ward and Griffin (1977-79). This study was funded by the Teaching and Instruction Program of the NIE in order to determine whether such an alternative could resolve some of the problems inherent in the linear strategy. The IR&DT project laid down much of the groundwork both in the development of the theory and practice of collaborative research in schools and for our four bilingual inservice projects.



Basically, design of the IR&DT project called for teachers, a researcher, and a trainer/developer to come together as a team. The team was to focus on an issue of importance to teachers and to design and conduct a study applicable to those aspects of teaching and learning relevant to that issue. In addition, the IR&DT team was expected to produce a staff development program utilizing the research findings. This developmental activity was to be done concurrently with the research. The project was implemented in two different sites, one in an urban setting in California, and the other in a rural setting in Vermont. These sites were selected in order to test the implementation under diverse circumstances.

A complete discussion of the IR&DT project is not within the scope of this document.\* However, the findings of the project are relevant to our study, and may be summarized as follows:

1. The characteristics, skills, and previous experience of the participants appear to affect the degree to which IR&DT is implemented, with high congruence on the essential features of the strategy. The presence of these features, in turn, is related to the rigor and usefulness of the R&D outcomes.
2. Commitment to educational R&D and previous involvement in such efforts by the participating institutions also influenced the conduct of the IR&DT.
3. Orientation to IR&DT is important. It should be designed to fit the needs and context of the participating people and institutions. If the required participant skills do not exist, training in these skills should be pursued.
4. Technical Assistance should be available throughout an IR&DT effort.
5. The typical time lag between research and development can be reduced with the IR&DT strategy.
6. IR&DT implementation can be cost effective.

#### Clinical Inquiry

Fisher and Berliner (1979) refer to another form of collaborative research which they call "clinical inquiry." They suggest that cooperative work by the teacher and the researcher can generate knowledge about a broad range of teaching/learning phenomena, while the research team is also working on a specific classroom problem. Thus, according to these researchers, the indirect outcomes of a collaborative relationship can, at times, be just as valuable as the direct outcome.

\*Refer to Interactive R&D On Teaching Study, Final Report, Far West Lab, 1979.

### Action Research on Change in Schools

A more recent, ongoing study, also grounded in the concepts of interactive research, is that of Oja and Pine, (1982). Action Research on Change in Schools (ARCS) is a "collaborative action" research project involving teachers from two junior high schools, and university researchers from two separate universities. In this project, the practitioners and researchers meet together as teams to identify and study a "researchable" problem in their respective schools. The study attempts to analyze the teachers' stage of development and the schools' stage of development in terms of change efforts. In addition, it examines the ways in which participation in the collaborative research process influences teachers' perceptions of change, promotes individual teacher change, and supports change within the school. Findings to date indicate that classroom teachers can effectively function as practical researchers, focusing on real problems of the classroom and the school.

Thus, it seems that a collaborative relationship between researcher and practitioner might be harnessed to the task of articulating and solving concrete, every-day problems. In the next section, we deal with four such efforts, each designed to bring researchers and practitioners together to work on issues involving teacher inservice education.

## II. CASE STUDIES

The theoretical and empirical base regarding collaborative research is not yet complete. A great deal of testing and analysis remain to be done, especially in the areas of educational change and school problem-solving. We know that the implementation and diffusion of educational innovations, such as bilingual education, are slow, complex processes. With this in mind, our intent in the NIE study was to examine and document as fully as possible the experience of four school communities struggling with the difficult problem of how to develop and maintain an effective staff development program to enable their teachers to provide a sound education for students with limited English proficiency. It was not the purpose of the study to produce and disseminate "proven models" of research or "ideal" inservice programs.

The section which follows describes four approaches that might be drawn upon by other school districts to fit the unique needs of each. For each case study, the individual projects' interim and final reports served as the primary source of information. Beginning with a short description of contextual background, we proceed to examine how the collaborative research process was implemented in each of the four sites.

### SCHOOL SITE A

#### Background

School Site A is located in the southwestern part of the United States. Approximately 40 percent of the general population in this district is Mexican-American, and more than 50 percent of the families have an annual income below the national poverty level. The educational needs of this community are high. The 1970 census showed that 84 percent of the Mexican American adult aged 25 or older never completed high school. Mexican American students make up 60 percent of the total student population, and many of these students are in need of special help.

The school had attempted to provide effective education to limited English proficiency (LEP) students for many years, but in the late 1970's, a number of organizational changes in the district made this task more difficult. The school that housed kindergarten children moved to a new campus during the summer of 1978 to create a single grade school. Separate schools were also established to serve grades 2-3 and grades 4-5, respectively. Thus, teachers from neighborhood schools throughout the community were joined together at these grade levels under a more centralized district office. The administrative and instructional staff then faced the task of integrating their bilingual programs in entirely new settings.

The majority of the teachers of LEP students in this district are relatively new to bilingual education. Only 36 percent of the K-5 teachers

are certified bilingual teachers or speak Spanish well enough to teach in Spanish. And even though 54 percent of these teachers have had more than 5 years of teaching experience, they have less than 3 years' experience in bilingual education. A number of the most experienced bilingual education teachers are non-Spanish speakers who have been active in bilingual education primarily through teaching English as a second language.

In 1979-80, inservice education for the teachers of LEP students consisted of a basic district-wide program, with additional programs provided by state and Title VII funds. The district program included 5 full days of early dismissal for after-school inservice sessions. Most of the sessions were conducted by outside consultants. In addition, teachers could choose their own inservice education and earn compensatory time, which permitted them to take one scheduled inservice day off for every 7 hours of attendance. These programs were usually held in a neighboring city on Saturdays and on weekday evenings. In 1980-81, the inservice plan remained basically the same, except that teachers were required to attend all five district-wide inservice sessions, rather than choose their own programs.

Both administrators and practitioners had been struggling for some time with the problem of how to upgrade their inservice programs. Thus, when staff members of a nearby research facility invited district officials to join them in a research effort focused on inservice education for bilingual teachers, the officials agreed enthusiastically.

There was a series of meetings between the researchers, administrators, teachers, and parents while the research proposal was being prepared for submission to the NIE. Two broad lines of inquiry emerged:

- . What are the effects of locally conducted, applied research on policy and practice related to the inservice education of teachers of limited English proficient students?
- . How would the research finding affect the overall design of an inservice program?

After the award was made, an advisory committee composed of 12 key teachers and administrators, and groups of teachers from each of the three target schools was formed to work closely with the researchers in planning and carrying out the research. After several weeks of collaborative effort, the group formulated the basic research question: How would data gathered along the following dimensions be used to modify the district's inservice program for teachers of LEP students?

- . The perceived needs of teachers for skills and knowledge necessary to instruct their students.
- . Teachers' levels of use of specific components of the instructional program for LEP students, i.e., Spanish reading and ESL.
- . Teachers' stages of concern, also concerning specific components of the instructional program.



## Research Strategy

Both quantitative and qualitative research methods were employed in the study. The needs and concerns of 108 teachers in grades K-5 in three schools were measured by structured questionnaires, descriptive statistics, and ethnographic field notes to evaluate teacher interaction and degree of involvement in the project. The majority of the teachers of LEP students at each of the schools completed questionnaires and participated in interviews. In addition, teams of teachers from each school assessed the instruments, helped interpret results, and worked closely with each other and the project director to apply some of the findings to the improvement of the district inservice education plan.

To acquire information concerning the teachers' needs, and to determine which elements of the current bilingual instructional program they were using, and to identify their concerns regarding these elements, the researchers and teachers turned to the educational change theory that had been developed by Gene Hall (1977). Hall and his colleagues at the research and Development Center for Teacher Education (RDCTE), devised a technique to measure change, the Concerns-Based Model (CBAM). This instrument has been used to investigate a number of educational innovations, such as team teaching, elementary school science curriculum, and individually guided education. More recently, the CBAM has been adopted by researchers at the research facility for use in a number of bilingual programs (Dominguez and Tunmer, 1979).

Under the CBAM procedure, the adoption of innovations by individuals within formal organizations is complex and highly personal. To gauge the effectiveness of an innovation, it is necessary to directly assess the individual's interest in and use of innovations. An increase of familiarity with and use of an innovation leads to movement along two continuums: stages of concern about the innovation, and levels of use of the innovation. As teachers become increasingly accepting of an innovation, and begin to demonstrate their willingness to use it the innovation may become institutionalized. Thus, by acquiring some measure of the degree to which the bilingual teachers in the district utilized the various elements of the bilingual program, an indication of the type of inservice program best suited to the teachers' needs and practice would emerge.

For this project, two CBAM instruments were modified for use, Stages of Concern (SoC) and Levels of Use (LoU). Two other instruments designed and used previously by the research facility were also employed: the Bilingual Classroom Questionnaire (BCQ), and the Professional Development Questionnaire (PDQ).

### Stages of Concern Questionnaire

This questionnaire consists of an introductory page, 35 test items, and an optional demographic page. The same questionnaire items are used each time, but the name of the innovation is changed on the introductory page. The introductory page outlines the purpose of the instrument, gives directions for completing the form and indicates which "innovation" the

individual is to consider when responding. The remainder of the questionnaire consists of the 35 items to which the individual responds. The respondent checks each question on a 0-7 Likert scale according to what degree the item reflects his current concern. Sometimes, an optional demographic page is included in order to gather descriptive information about the respondents. The questionnaire takes approximately 10 to 15 minutes to complete. It can be issued by mail or in person and can be administered to a group or to an individual.

#### Level of Use Questionnaire

To measure the levels of use of any particular educational innovation, Hall and associates (1975), also developed a focused interview technique. The interview involves a branching format with specific questions and follow-up probes. Four different levels of use can be reliably measured by using this technique. These are: mechanical, in which the teacher focuses most effort on the short-term, day-to-day use of the innovation with little time for reflection; routine, in which the use of the innovation is stabilized and little thought is being given to improving its use; refinement, in which the teacher varies the use of the innovation to increase the impact on students within the immediate sphere of influence; integration, in which the teacher combines her own efforts to use the innovation within related activities of colleagues to achieve a collective impact on students within their common sphere of influence. The Level of Use Interview is not specific to any one innovation; the same types of questions are asked of all innovations. However, as the Project Director points out in the final report, to adapt the LoU interview to a complex innovation like bilingual education, the frame of reference must be clearly specified. This procedure requires a basic definition of the specific component of bilingual instruction used by the teacher--Spanish reading. In addition, questions must be formulated to determine the variations of use (configurations) of the specific components as they currently exist, and guidelines and distinguishing characteristics developed to determine what constitutes use of a specific component (how often, how long, etc.). This information is required before conducting the interview in order to obtain enough information to be able to make a "use/non-use" determination. The LoU interviews in this study were conducted by trained LoU interviewers who are quite familiar with various aspects of bilingual education.

#### Bilingual Classroom Questionnaire

Two broad types of bilingual instructional programs have been employed, transitional and maintenance. Transitional programs are those in which the student's dominant language (in this case, Spanish) is used as an instructional tool primarily to facilitate the acquisition of English language skills. Instruction in Spanish is decreased as instruction in English is increased in each successive grade level until all of the curriculum is delivered in English. Language maintenance programs also utilize both languages as vehicles for teaching, but in this case, after instruction in the primary language is gradually decreased and English increased, instruction in both languages continues as a predetermined point in the student's advance. By maintaining both languages throughout the instructional program, it is hoped that the student will become bilingual and bicultural.

It is sometimes difficult to distinguish these two approaches in the field, where a number of configurations may be used by the teacher. Therefore, a process to gather data regarding the configuration of bilingual programs in practice is required. The research facility, in earlier work, developed a survey to gather the following kinds of information from each teacher:

- . What subject areas and/or instructional activities are provided to the teacher's homeroom students throughout the day?
- . For how long is the instruction provided and what is the anticipated duration of the activities (two weeks, one day per week, all year long, etc.)?
- . What are the language classifications of the student or group of students within each instructional activity (balanced bilingual, monolingual English, monolingual Spanish, Spanish dominant, etc.)?
- . Who is the primary instructor for the activity (teacher, teacher aide, resource teacher)?
- . In what language is the activity conducted (including both language of instruction and language materials)?

Researchers working on this project made use of these questions to develop the Bilingual Classroom Questionnaire (BCQ) for use in this project. Teachers contributed to pilot-testing and refinement of the instrument.

The underlying purpose of the CBQ was to reveal the percentage of time devoted by the individual teacher to Spanish language arts, to determine the teaching of major content areas in Spanish, and to chart variations in practice within each grade level. The Principal Investigator of the project believed that these results would permit inservice program planners to decide if the type of bilingual program being implemented in the classroom corresponded to the intent of the district-wide program. If radical changes in type of program were called for, they might require shifting staff, recruiting teachers with special qualifications, or intensive language training. If, however, the district program was workable, the emphasis of the improved inservice program might be to helping teachers to reach higher stages of concern and higher levels of use regarding components of the bilingual program as it was currently being implemented.

#### Professional Development Questionnaire

Given the complexity of the task, the researchers felt that an additional instrument was necessary in order to provide data on the teachers' perceived needs for skills related to LEP children. The Professional Development Questionnaire (PDQ) consists of 62 items selected from published competency lists based on the opinion of experts, and on studies drawn from literature on bilingual education. The items are

organized into eight different topics, general information, planning for instruction, instruction of content areas, management, linguistics, skills, culture, assessment and evaluation, and school-community relations.

#### Data Collection

Teachers from all three schools and district administrators met with members of the research facility to learn as much as they could about the use of the various instruments and the possible outcomes. After much discussion, it was decided that the questionnaires would be utilized to examine:

- . the teachers' general knowledge about and attitudes toward the current and past inservice programs of the school district;
- . the types of concerns that teachers have regarding the teaching of different aspects of the current bilingual program;
- . the level of use or implementation reached by teachers in primary components of the bilingual program (Spanish reading, English reading for LEP students, and English-as-a-second language);
- . the perceived needs of teachers of LEP children for acquiring skills and knowledge; and
- . the type of bilingual program being implemented in grades K-5 (based primarily on time spent teaching Spanish and English at each grade level).

Most of the data was collected at each school during meetings convened immediately after school by the Project Director. Since the various questionnaires were administered to all the teachers at a school simultaneously, it was not necessary to keep after them to complete the questionnaires. Also, any questions that a teacher might have regarding the instrument could be directed to the researchers present at the meeting. The Principal Investigator believes that providing these opportunities for direct communication probably resulted in a higher validity of response.

All of the interviews were conducted at each campus within a two-month period. Since each interview was taped, it was possible for a trained Level of Use rater to closely examine the extent to which any bilingual program component was being implemented. A very important aspect of these individually conducted interviews was the opportunity they presented for each teacher to meet individually with the Principal Investigator. In this way, the investigator gained valuable insight directly from the practitioners.

#### Findings

Teachers' concerns regarding such bilingual program innovations as ESL, English reading, and Spanish reading were obtained from teachers who were conducting classes in these areas. Teachers from all three schools were highly concerned with determining how to supplement and enhance their current ESL program. Many of them pointed to the need for a continuum of



skills that they could use to evaluate a child's level of performance. A number of teachers from each of the schools were not sure if they were providing their students with appropriate instruction. These teachers reported a great need for learning how to develop more precise learning objectives in the ESL program. Teachers at two of the schools were worried about what they saw as "lack of a structured ESL program," which they saw as contributing to inefficient use of their time.

In teaching English reading to students with limited English proficiency, the primary worry of teachers at all three schools was that of students' attitudes toward reading in general. Specifically, they were concerned about how best to motivate children and how to get them to enjoy reading in English. At two of the schools, coordination of tasks and personnel, and logistical matters were seen as consuming too much of the teachers' time. This concern was particularly strong at the K-1 school which makes use of the open classroom environment.

Some of the bilingual teachers teaching Spanish reading were eager to learn what other teachers are doing in this area and to determine who to supplement and enhance the Spanish reading program. Teachers recognized that this program needed improvement, especially when it came to locating or developing better materials. A number of the teachers in each school felt that much of the Spanish curriculum and materials were not appropriate because of difficulty level or dialect differences. The majority of teachers also complained that they did not have enough time to organize their daily activities.

#### Level of Use

A total of 82 interviews were conducted regarding the implementation of bilingual program components (innovations). Results of the rating of each teacher's use indicated that most of the teachers in the school district fell into four levels on the LoU scale. More than 50 percent of the teachers were rated as "Routine" users, in which the innovation was implemented with few or no changes being made and with minimal problems of management and organization. Approximately 25 percent of the interviews were rated at the "Refinement" level. Here the teacher had mastered the innovation to the point where she/he has the resources to implement changes so as to increase the overall impact of the innovation on the students. As outcome of the interview process, 12 teachers were rated as "Mechanical." Teachers at this level reported that they experienced problems in being able to implement the innovation because of poor organization, inadequate planning, or inability to manage classroom behavior effectively. Most of the teachers who were rated "Mechanical" were new to bilingual education or were in their first year of implementing the particular innovation. Only a few teachers were rated as having reached the "Integration" level, defined as mastery of the use of the particular innovation and spending some time collaborating with other teachers to achieve a collective impact on their students.

Results of the Level of Use instrument indicate that the teachers in this district varied widely in stages of implementation. Although more than half were at the "Routine" level of use, enough teachers were having difficulty implementing bilingual program innovations to warrant redesign

of the school district's inservice education program along lines which would be of value to all teachers, especially the new and inexperienced ones.

#### Bilingual Classroom Questionnaire

Unfortunately, the majority of teachers in assessing the outcome of this questionnaire concluded that the results were not valid, and consequently, of little value in helping to design the inservice program. The teachers felt that the patterns obtained did not reflect what actually went on in the classroom. For example, the instrument indicated that bilingual Spanish-dominant children in kindergarten received an average of only 16 percent of language arts instructional time in Spanish, with 84 percent of the time devoted to English. This was at such variance with the teachers' own classroom experience, that the findings were suspect. At meetings held in each school, the teachers were asked to explain the discrepancies. Many teachers responded that the instrument's language classification system had been very confusing, and that the majority of the teachers had interchanged the English-dominant and Spanish-dominant bilingual students. At one school, teachers reported that they had been rushed when the questionnaire was administered and they had not understood the instructions.

Another criticism of the teachers was that the questionnaire did not ask for the exact numbers of students of a given language classification who were being instructed during a specific time period. If a teacher checked the category of Spanish dominant for an ESL class of 30 minutes each day, it was not possible to determine whether only one Spanish-dominant student was involved or whether 25 were involved.

#### Professional Development Questionnaire

More than 50 percent of all teachers responding to this instrument felt that the greatest need for teacher training was in "teaching reading" and "attending to behavior problems." When teachers were asked to tell why these two areas were given such high priority, they stressed the fundamental need for all children to read well. They also observed that in their own experience, problems resulting from ineffective classroom management took precious time away from the instruction of major content areas.

#### Outcomes

Several changes related to inservice teacher education of teachers of limited English-proficient students were made as a result of this study. Even though district administrators had a good idea that changes were needed, the study provided them with concrete suggestions upon which to base these changes. According to the director of bilingual education for the district, a number of alterations were made that will directly improve the bilingual inservice program. The following list comprises the major revisions that are being implemented:

- Teachers are to decide for themselves what types of inservice sessions they would like to have and what topics should be

presented. In previous years, bilingual teachers were told which sessions to attend.

- . Teachers will play a major role in choosing topics for inservice training, although administrators will still be influential in determining some topics they feel essential.
- . Inservice training will be individualized as much as possible, especially for new teachers.
- . Inservice sessions which were formerly held on Saturdays will be scheduled during the regular school day and will be ongoing.
- . An increased effort will be made to meet the special needs of teachers, depending upon the school and grade level at which they teach.

As a result of the project, the ESL program was also modified in the following ways:

- . Since teachers expressed a strong need for more help and training in ESL, a structured continuum of skills will be developed to serve ESL teachers from grades 2-6. The previous year the continuum of skills existed for grades K and 1 only.
- . ESL teachers will receive individualized inservice training, with teachers in the same schools collaborating with each other as much as possible.
- . Teachers may now teach ESL during a scheduled class period, or they may opt to incorporate ESL into the class curriculum throughout the day.
- . While much leeway was given to teachers on ways to implement ESL, they will be accountable for the quality of their performance and will be monitored regularly.

Also, direct changes were made in the inservice program for bilingual teachers. ESL materials were developed, but more importantly, the participation of teachers and administrators in the design and implementation of the research design made it possible for practitioners to learn how to use a number of helpful instruments.

## SCHOOL SITE B

### Background

The school district which comprised this project is one of the largest high school districts in the state. The total number of students for the academic year 1979-80 was approximately 23,000. The district's minority population is close to 60 percent. Hispanics comprise 39 percent of the total population and more than 70 percent of the student population. Asian/Pacific Islanders (including Filipinos) comprise approximately 12 percent, Blacks, approximately three percent, Alaskan natives and American Indians, 0.5 percent, and Whites comprise 46 percent.

The minority population in the school district is increasing rapidly. For this reason, the district was confronted with the need to reconsider curriculum and instructional methods. The number of teachers specifically trained to teach limited English speaking (LEP), and non-English speaking (NEP) students is low. District reviews showed that approximately 85 teachers did not have the training required to teach their LEP and NEP students.

The inservice efforts of school districts in the past have been extensive and diverse. Policy 4131, which was adopted by the Board of Education in 1977, states:

Professional staff shall be provided opportunities and encouraged to participate in programs for the development of increased competence and effectiveness in the performance of their assigned duties. Planning and implementation of such programs shall be done cooperatively by administrators and staff members.

The writers of the NIE proposal contend, however, that the current staff development practices in the district do not conform to the policy statement. They reported that many of the teachers workshops reflected "top down" decisions, and were not relevant to everyday needs. Given the small number of qualified bilingual teachers in the district, staff development activities geared to the concerns of these teachers were seen as highly essential.

### Research Strategy

Local school officials worked closely with two university professors in designing the study. The professors, each a faculty member in the education department of a neighboring university had previously served as consultants to the school district in a variety of problems related to bilingual education. Their close work with teachers over the years had led them to conclude that teachers should be the principal agents of their own professional growth. Thus, they adopted a research paradigm for this study which was decidedly teacher-centered. The research design was grounded on the following assumptions:



- . Teachers are best qualified to identify their own instructional strengths and weaknesses and therefore are eminently qualified to formulate research questions relevant to them.
- . Teacher instructional behavior is changed through systematic observation of other teachers teaching; analysis of the data collected during the observation of other teachers in the classroom; discussions with other teachers regarding the analysis of their findings; attention to instructional problems; and modification of solutions through trial and re-testing of hypotheses.

Twenty secondary "master" teachers from six schools were selected to participate in the project. These teachers were to enroll in a training course called "Clinical Supervision Training. After receiving 30 hours of intensive training, the teachers would meet as a group, biweekly, with the professors, working as Co-Principal Investigators. In addition, each teacher was paired with a student-teacher whom they would observe in the classroom and then provide appropriate feedback. In the process of supervising the student-teacher, utilizing the skills learned in the clinical supervision course, the master teachers would define a problem relevant to their own work with LEP students. They would then attempt to examine the problem by applying standard education research methods, i.e., stating problem in operational terms, designing instrumentation, collecting and analyzing data, and arriving at conclusions. In this way, two concurrent processes would take place, student-teachers involved in pre-service training at the hands of the master teachers, and master teachers involved in on-going inservice training providing them with appropriate observation and research skills. The master teachers would, in effect, participate in a "hands-on" staff development program.

#### Clinical Supervision Training Model

The procedure used for clinical supervision training of the master teachers concentrated on developing effective interpersonal relationships, systematic observation and analysis of classroom interaction, and on providing objective feedback to the student-teachers on their performance. The program was made up of four sequential steps:

##### Step One

- . Practice in defining the instructional problem of the student-teacher in behaviorally observable terms, operationalizing variables and defining the problem through testable hypotheses;
- . Setting a base criterion, the process of suggesting behaviors of solutions to solve problems, and aiming for a change of these behaviors if criterion is not reached;
- . Selection of construction of a proper observation instrument.

### Step Two

- . Practice; teachers were given the opportunity to observe classroom interaction on film, problems of interrater reliability were discovered through this process.

### Step Three

- . Analysis; teachers had the opportunity to practice analyzing data collected by observation and to interpret it for purposes of maintaining or identifying classroom behavior that should be changed.

### Step Four

- . Conferences with the investigators immediately after a classroom observation gave the master teachers the opportunity to relate the result of the analysis and interpretation to the student-teacher.

A basic assumption of the clinical supervision model is that the novice teacher will freely discuss her/his classroom-related problems with the supervising teacher. Early in the project, however the investigators reported that three student-teachers were having problems with pacing of the class and classroom control. They did not seem to realize this even though their master teacher did. Also, all the master teachers were reluctant to begin classroom observation until their student-teacher had come to them admitting a problem. In view of this, the observation protocol was redesigned. An anecdotal method of classroom observation was introduced. The master teacher did not now wait for the student-teacher to come to him. The master teacher frequently went to the student-teacher's classroom and recorded as much of the student-teacher interaction as possible. No evaluations were made and judgemental language was avoided.

### Research Teams and Selection of Research Problems

The master teachers were supervising a student-teacher while at the same time meeting with the principal investigators at least once a week and were also attending a three-hour seminar every other week. With all this activity, the teachers were forced to take a long time to identify and define a viable research problem. The investigators, therefore, introduced a consensus mode in which decisions regarding research teams and problems were to be reached through a process of group dynamics, with participants bringing to the group their individual opinions and ideas about what researchable questions were most important to them. The investigators hoped that through this process, and using the communication skills learned in the early phase of the project, the teachers could formulate a plan for going about the research. Adhering to the key assumptions of the consensus model themselves, the investigators insisted that the teachers themselves determine the research questions to be pursued.

By the middle of the third month of the project, however, it became apparent that consensus by the group was impossible. Two major deterrents were operating: the dispersal of the teachers across six different schools, and the wide divergence of teachers' knowledge of social science research, years of teaching experience, and past experience working with innovations.

The investigators decided that it was more important to encourage the formation of research teams and to assist them in implementing their own projects than to wait for the whole group to agree to one common research project. Biweekly seminars conducted by the project investigators were therefore devoted to presenting and discussing various types of educational research, including such topics as definition of problem, research design, and basic statistics. At these sessions, the master teachers also shared their mutual research problem.

The collaborative process at these seminars proved important to the teachers. They were able to work individually or in small groups on their own projects, while at the same time sharing ideas and giving each other support and assistance in developing strategies for conducting research. The collaborative process was particularly effective in assisting those teachers having the greatest difficulty in dealing with their research problems.

Collaborative research teams composed of teachers working in the same school were established. Six teams, one in each school, were created and set to work on a variety of problems. It is not within the scope of this document to describe each team and its work in detail. The reader is referred to the project's final report for a complete discussion of the work done by each. A brief review of the workings of one of the more successful teams is, however, appropriate.

#### School I

The team working at school I decided to focus on the effects of English reading achievement of LEP students of the school program, home background, and linguistic abilities. The study involved 105 students (ninth grade) and 82 of their parents.

Team composition: three bilingual teachers and one research assistant.

Subject taught: Teacher A: Spanish for Spanish-speakers and bilingual mathematics

Teacher B: Math and bilingual mathematics

Teacher C: Health Science and bilingual social studies.

Research Interests: Teacher A: Bilingual teacher competences

Teacher B: Effect of parental attitudes toward education on student achievement

Teacher C: Why some students remain in ESL classes so long.

#### Classroom Observation:

The classroom observation procedures of this team called for observing bilingual as well as non-bilingual teachers and by careful description, to determine if special competencies of bilingual teachers could be isolated. Analysis of this descriptive data was carried out as follows. The transcript of each teacher's observations, using the anecdotal format was collated for:

- the techniques of the teacher observed,
- the subject matter taught,
- language used, and
- variables recorded by the observer.

Two of the three observers counted and labeled certain types of variables such as, which students answered questions and the number of classroom disruptions in a given period of time. The third observer wrote an average of five lines of evaluation each 20-minute period. However, these descriptions proved too general and subjective to be used in the analysis.

#### Instrumentation:

Three instruments were developed collaboratively by the team:

1. A questionnaire (revised three times) to explore what factors were involved in determining the length of time a student is enrolled in ESL.
2. An interview protocol to conduct 82 home interviews applied in the following sequence:

Teacher A met with a research assistant in two separate four-hour sessions and came up with categories of information to provide a general view of the home background of the students at the school. These categories were then presented to the rest of the team for revision. Specific items for the questionnaire were presented to all project participants for review. Five other project participants (outside school I) were enlisted to assist in a Spanish version of the questionnaire.

3. An interview program to probe teacher attitudes toward different types of students.

#### Results:

After the data on linguistic abilities, school programs, home-background, and reading achievement was gathered, frequency distributions, cross tabulations, and regression equations were concluded. An analysis of the correlation coefficients was undertaken to explain simple correlations (positive and negative), across all of the variables included in the two regression equations.



### Linguistic Ability

One third of the students in the study were classified as limited or non-English speakers. One third was bilingual, and approximately one third was English-dominant. The parental interviews showed that 45 percent of the students preferred to use mostly English or all English at home with their siblings.

### Reading Achievement

Seventy-one students took form S, level 4, of the Comprehensive Test of Basic Skills (CTBS). Of these, 85 percent fell below grade level. Over 50 percent measured at the 27th percentile rank or below.

### Home-Background, School Program, and Linguistic Ability as Related to Reading Achievement

Two regression equations were obtained. In the first program, variables accounted for none of the variance. Linguistic abilities, in the form of Spanish linguistic ability scores (LAS), accounted for 6 percent, and the combined home-background factors accounted for 93 percent of the variance in the CTBS scores. However, in the second regression equation, school program accounted for 1.0 percent of the variance, and linguistic ability accounted for 3.0 percent. Again, the home-background variables combined accounted for the vast majority of the total variance, 60.5 percent. In both equations, the most important home-background variables were those involving attitudes toward Spanish and English. The second most important variables were those involving educational and professional aspirations and expectations for the children.

### Recommendations:

Based on their findings, the research team at school I made four recommendations:

- that a further exploration of the attitudes of dual-language children toward English and Spanish be made to see how they affect the students' English reading achievement;
- that ways be found to encourage the parents of the students who have special English and Spanish programs to be more involved in school.
- that the school include a strong career counseling component for dual-language students which involves both parents and students. The team recommended this as high priority since parents' attitudes toward English and Spanish, and their educational and professional aspirations seem to have had the strongest effect on English CTBS scores;

that a secondary analysis of the data be conducted, with the cooperation of the teachers in the school to identify the characteristics of those children for whom native language proficiency is a substantially predictive of English reading achievement. The study of the research team at school I also concluded that one reason that differences in the ability of school programs to predict English reading achievement largely relies on language dominance rather than native language proficiency and literacy skills.

### Outcomes

Five teams of bilingual teachers succeeded in identifying problems dealing with issues of concern. However, even though most of the teachers at first seemed interested in studying classroom interaction, only one team was persistent enough to carry out a piece of research in this area. Most of the other teachers ultimately focused on questions beyond their spheres of influence. Yet, with the exception of two teachers, the rest of the group indicated that they had learned a great deal. Major outcomes of the study in School Site B included:

- . collaboration among teachers seems to work best when teachers are based at the same school, are interested in the same subject matter, and the same population of students;
- . beginning teachers (less than three years) were not as successful in defining relevant problems;
- . systematic observation of classroom activities, analysis, and feedback to the respective teacher are extremely complex.

In addition, a number of suggestions regarding the district inservice program were made. Participating teachers recommended the following:

- . Techniques of individualization must be stressed in a hands-on matter.
- . Training should be conducted on-site (within the school).
- . Bilingual student teachers should be put through a process of collaboration by intensively observing each other's classrooms.
- . Structured observation techniques as a method of discovery should be taught and practiced.

As a result of the project, the school district now has a cadre of teachers who have skills in identifying and defining problems and carrying out research. It is expected that other groups of teachers will undergo the same extensive staff development program.

## SCHOOL SITE C

### Background

Site C encompasses twenty-seven municipalities and townships, as well as a large unincorporated area. A wide diversity of ethnic and racial groups, ranging from urban to agricultural exists. During the past ten years, a major shift has occurred in the makeup of the population. Since 1969, the percentage of Hispanics in this district has increased from approximately 17 percent to 34 percent. This radical shift has had a major impact on the LEA's educational program. Approximately 14,000 students have been identified as being of limited English proficiency. Most of these students are of Spanish-language origin, representing approximately 6.0 percent of the total school membership (226,000 in 1980). Of these, 84 percent are elementary school students and 16 percent are at the secondary level.

Extensive training of classroom teachers of LEP students has been provided since 1961. This has been attempted under the following rubrics: English Speakers of Other Languages (ESOL), Spanish for Spanish Speakers (Spanish-S), Spanish as a Second Language (S-SL), and Bilingual Curriculum Content (BCC).

The county's public schools contain two main types of Bilingual education: the Bilingual School Organization program, which provides instruction to all students in Spanish as well as English in curriculum areas, and the Transitional Bilingual Basic Skills program which provides instruction in English and in the home language of LEP children until they can function adequately in English.

The county office has also shown its commitment to staff development with the adoption of the Professional Incentives Program and of the state master plan for bilingual teachers. The Professional Incentives Program permits teachers to accumulate points through staff development in order to earn salary increments. Through master plan points, the teachers can also earn extension of state certification in their areas. The Internal Certification Program, established in 1971, provides ESOL teachers, and aides in Spanish-S and Spanish-SL, as well as all staff members involved in the Bilingual School Organization program, with the opportunity to become internally certified until such time as the State Department of Education establishes certification in bilingual education. This program makes it mandatory for teachers and para-professionals to undergo inservice training in the component in which they are involved during their first year of teaching.

In spite of all these efforts, many of the teachers felt that the school district had not been able to determine the effectiveness of the inservice training. One of the most significant and consistent complaints from the teaching staff was that students who entered their classes after having gone through the ESOL program, continued to display very serious reading problems.

Bilingual education specialists and school principals had also been concerned with identifying effective instructional strategies for teaching

English reading to bilingual children. Therefore, news of possible funding was well-received. The bilingual specialists saw this as a good opportunity to examine the district-wide concerns regarding the reading problem, and invited researchers from a nearby university to help them write a research proposal. The researchers agreed to a partnership, and subsequently met with the bilingual specialists and a core of teachers to begin the difficult task of translating diffuse concerns into precise research questions. After a series of meetings, the following questions were generated:

- . In what areas of reading do former ESOL students encounter difficulty?
- . What instructional procedures were utilized with former ESOL students who are currently reading below grade level?
- . What instructional procedures were utilized with former ESOL students who are currently reading at or above grade level in regular English classes?
- . What instructional activities can be designed for teachers to help facilitate transition of ESOL students?
- . How can ESOL and regular classroom teachers learn to use the instructional activities identified through this research?
- . How can the model instructional activities developed through this project be applied to the improvement of inservice education for all teachers of limited English proficiency students?

### Research Strategy

The Bilingual Inservice Teacher Education Research Project (BITER) was implemented under a collaborative relationship between school district administrators (bilingual specialists), classroom teachers of LEP students, and researchers from a nearby university. A select group of teachers with substantial experience in teaching LEP students was involved in the research process, the development of instructional activities in reading, and the design of a training module. In general terms, the purpose of the project was two-fold:

- . To conduct research which would identify effective procedures in teaching English and reading to LEP students.
- . To develop a prototype inservice education module based on the identified reading procedures which could then be used to improve reading programs in the district.

The research strategy was designed so that the possible correlation between reading levels of former LEP students and variables which might influence these levels could be determined. Of primary significance was the fact that the research problem was identified by classroom teachers who felt compelled to address a problem which they felt was critical: the poor performance of large numbers of LEP students in English reading.



The teachers and the researchers decided that a study should be made of the correlation between the reading scores of former students of the district's ESOL program and four variables:

1. socio-economic status;
2. the degree of interaction and cooperative planning between the ESOL teachers and regular (English dominant) classroom teachers;
3. inservice training in ESOL methods and in the planning for transition of the students from ESOL instruction into the regular reading program by the former students' teachers.
4. reading and content area instruction by the former ESOL students in their native language.

### Subjects

Approximately four hundred former ESOL students from 17 elementary schools served as subjects for the study. The sample was broken down into the following categories:

- those who entered the ESOL program in kindergarten and are currently in grade three;
- those currently in grade three who entered the ESOL program in first grade;
- those who entered the ESOL program in kindergarten and are currently in grade four;
- those who entered the ESOL program in first grade and are currently in grade four.

Each school principal obtained permission from the students' parents before the investigators were allowed to examine students' cumulative records.

### Instruments

Reading level of the students was determined by using the Stanford Achievement Test just before they left the ESOL program. Measures of independent variables were obtained by using a questionnaire designed by a select group of teachers (Figure 1).

Present School \_\_\_\_\_

Name \_\_\_\_\_ ID Number \_\_\_\_\_

Birthday \_\_\_\_\_ Age \_\_\_\_\_ Sex \_\_\_\_\_

Reading Instruction in L1\*? Yes \_\_\_\_\_ No \_\_\_\_\_

Entered ESOL Program \_\_\_\_\_ Existed ESOL Program \_\_\_\_\_

Time Spent in ESOL Program \_\_\_\_\_

Readers: ESOL - Grade \_\_\_\_\_ Dates \_\_\_\_\_ Regular - Grade \_\_\_\_\_ Dates \_\_\_\_\_

Teachers: ESOL                      Trained in ESOL & RSVP Transition                      Trained in Techniques for Teaching ESOL\*\*

K	_____	y	n	y	n
1	_____	y	n	y	n
2	_____	y	n	y	n
3	_____	y	n	y	n

REGULAR

K	_____	y	n	y	n
1	_____	y	n	y	n
2	_____	y	n	y	n
3	_____	y	n	y	n

<u>Teacher Interaction</u>	<u>None</u>	<u>Informal</u>	<u>Formal***</u>
K	N	I	F
1	N	I	F
2	N	I	F
3	N	I	F

First Stanford reading score after ESOL exit \_\_\_\_\_

Basal level immediately after ESOL exit \_\_\_\_\_

LI reading level at time of Stanford \_\_\_\_\_

Content instruction in LI? Yes \_\_\_\_\_ No \_\_\_\_\_

Free or reduced lunch? Yes \_\_\_\_\_ No \_\_\_\_\_

Other information: \_\_\_\_\_

\* L1 = First language (Spanish)

\*\*refers to whether the teachers participated in either or both of the inservice courses provided by the district.

\*\*\*refers to whether ESOL and regular classroom teachers formally (regularly) communicated with one another about the students by planning lessons together, whether they informally met (on occasion) to talk about their students, or whether there was little or no opportunity for joint communicating and planning.

### Basic Procedure

After running a pilot test in order to check the effectiveness of the questionnaire, standard research procedures were applied. Data were obtained by examining students' cumulative records and by interviewing teachers. The amount of time spent with a particular teacher varied with the number of students each teacher had worked with in the former ESOL program. Teachers were also interviewed in order to determine the type of interaction they had had with their standard classroom colleagues. Data were coded onto opscan sheets. Analysis of variance was employed to test for significant differences.

### Findings

#### Variable (1): Socio-Economic Status

Results showed no significant relationship between socio-economic status, as determined by students receiving free lunches, and scores on the Stanford test.

Variable (2): Slight degree of significance between interaction and cooperative planning between the ESOL teachers and regular (English dominant) classroom teachers and reading scores.

No significant relationship was found between the reading scores of all students and degree of formal interaction (ESOL and regular classroom teachers meeting on a regular basis to discuss student progress).

#### Variable (3): Teacher Inservice Education

Statistical significance occurred only in the first grade. However, there were some trends which indicated that students whose first and second grade ESOL teachers received inservice training in only ESOL methods, performed higher on the Stanford test. Students whose regular third grade teachers received inservice training in only ESOL methods achieved a mean score of 136 on the Stanford test, while students whose teachers received no inservice training achieved a mean score of 126.

#### Variable (4): Instruction in the native language

There was a significant relationship between mean scale score for reading on the Stanford Achievement Test and reading instruction in Spanish. Students in all grades who did not receive any instruction in Spanish scored an average of 124 on the Stanford test, while those who learned to read concurrently in English and Spanish scored an average of 133. There was also a significant relationship between mean scale score for reading on the Stanford Achievement Test and content area instruction (math, science, and social studies) in Spanish. Students who did not receive any content area instruction in Spanish achieved a mean score on the Stanford test of 126, while those in all grades who received content area instruction in Spanish achieved a mean score of 132.

It is significant that children who had concurrent reading instruction in Spanish scored higher than children who did not. Thus, in this LEA it does not appear necessary to delay reading instruction in English.

#### Outcomes

A number of important findings emerged from the study. One finding indicated that Spanish-speaking students who are taught to read simultaneously in both their first and second languages achieved higher scores in reading English than similar students who are taught to read only in English. This implies that teachers of Spanish-speaking children should receive training in methods of teaching reading in Spanish. Another finding indicated that the teaching of curriculum content in Spanish is positively related to higher achievement in English reading. This implies that teachers of LEP students could profit from training in the methods of teaching content in both English and Spanish. A third finding with implications for teachers training is that there is a relationship between higher achievement in reading and training given to both ESOL and regular teachers.

#### Teacher Training Module

Several bilingual education specialists in this school district have more than twenty years experience working with bilingual and monolingual teachers. Their strong background, coupled with the knowledge gained from the study, were instrumental in developing a training module which enables both ESOL and regular classroom teachers to diagnose the reading needs of NEP and LEP students in grades K-6.\*

The comprehensive module is organized around the following topics:

- . Identifying the needs of limited English proficient students.
- . Meeting the educational needs of LEP students.
- . Meeting the reading needs of LEP students.
- . The teaching of language arts to LEP students.
- . Useful ESOL techniques for classroom teachers.
- . Suggestions for independent small group activities in regular classrooms.
- . Sample instructional activities in reading, K-6.

The district director of bilingual education stated that the topics are currently being used by several teachers as "springboards," adapting existing instructional materials to their own classroom needs.

A video tape consisting of one sample instructional activity in reading for each grade (K-6), and for a small group of trainable mentally retarded kindergarten students, is an integral part of the module. These video-taped lessons have been incorporated into the district's inservice program and are designed to facilitate the training of all teachers by

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\*The training module was submitted as a contract deliverable and is available from NIE upon request.



depicting actual classroom activities of ESOL teachers of varying degree of training and experience. The video tapes represent a teacher developed point of departure for the improvement of instruction to LEP students throughout the district and can be used in other locales.

An additional, but no less significant, result of the collaborative research process was the emergence of leadership among the classroom teachers themselves. Seven teachers who had been most active in the project volunteered to conduct experimental training sessions on the use of the module. These teachers have since trained ten less experienced peers who will, in turn, train others. Thus, not only are teachers benefitting from practical inservice activities, they are developing a cadre of teacher trainers who will be useful to school district administrators working to develop and sustain an inservice program for teachers of LEP students that is relevant and useful.

## SCHOOL SITE D

### Background

This study was conducted in two major school districts in a Northeastern state. One of these districts (X), serves 33 percent of the state's bilingual population. Ten thousand limited-English speakers are served in the bilingual program. Approximately 50 percent of the bilingual population is Spanish-speaking. There are also French, Chinese, Greek, Haitian, Italian, Portuguese and Vietnamese students. The other school district (Y), has approximately 60 limited-English proficiency students in grades K-8. Transitional bilingual programs in this district are provided for five different language groups: Greek, Portuguese, Haitian, Chinese, and Spanish. More than 55 percent of the district's bilingual population are Portuguese-speakers.

Over the last ten years, a major influence in these school districts has been court-ordered desegregation. The larger district (X) complied with the court order by busing children from various communities to schools that had previously been fairly homogeneous by reassigning school personnel and by creating bilingual programs in schools that had traditionally had a monolingual program and staff. The integration of children from varying cultural backgrounds and socio-economic levels created a great deal of turmoil in this district. Changes in the educational program and new staff assignments also led to anxiety within the teaching staffs. Numerous instances of conflict among staff and students occurred, especially in bilingual programs that were established in previously monolingual schools. The director of bilingual education in the region reported that many bilingual teachers felt alienated and that there was a serious communication problem between bilingual and monolingual teachers.

The smaller district (Y), was cited for noncompliance with Title VI of the Civil Rights Act of 1974 for failing to provide equal educational opportunity for LEP students. As a result, district Y was forced to take steps similar to those in district X. The diversity of language groups and the mandates of desegregation caused district Y to bus students and reassign personnel. Interviews with school principals in this district also revealed alienation of the staff and poor communication between bilingual and regular English teachers similar to those encountered in district X.

Bilingual programs in these two districts are transitional. Although the learning of English is their ultimate goal, little emphasis is placed on language maintenance. In fact, the state law, promulgated in 1971, states:

"Every school age child of limited English ability, not enrolled in existing private school systems shall be enrolled and participate in a Transitional Bilingual Education Program for a period of three years or until such time that he/she achieves a level of English language that will enable him/her to perform successfully in classes where instruction is given only in English."

Transitional bilingual programs utilize native language only for initial concept development. The primary objective of transitional programs in this state is to eliminate native language usage in the schools by the third grade. In keeping with the state law, LEP students are enrolled in the regular English curriculum after three years in the bilingual program.

Specific transition criteria regarding academic goals or English proficiency did not exist, however, in either of these districts. A frequent result was that children who lacked the necessary academic or social skills to succeed in standard English classrooms were nevertheless transferred. In district Y, more than 60 percent of the students who were transitioned from bilingual to English classes were not functioning at grade level in English. A large number of these children were returned to the bilingual program because of poor academic performance or unsatisfactory social adjustment.

As a consequence of the NIE project, a teacher-needs survey was done in both of these districts during the 1979-80 school year. Over 90 percent of the teachers responded to the survey. The single, most pressing concern which surfaced was the need to establish reliable transition criteria. In addition, the articulation of educational goals and the establishment of open communication channels between monolingual, English-as-a-second language (ESL), and regular classes where English was the standard language used, were listed as needed. The principal of school Y also informed the principal investigator that establishment of an effective staff development program in his school was critical. According to the principal, this was clearly demonstrated when forty students who had been recently transitioned to the third-grade English program could not function successfully and had to be returned to the native language programs. This occurred despite the fact that these students had received ESL instruction for three years.

Elementary school M (K-5) located in district X, was also chosen as a site for the project. This school provided a transitional program for Chinese- and Spanish-speaking students. M school also lacked definite transition criteria. Its principal and staff admitted that the current inservice program was very weak and did not address the communication problems among the different teachers, and the uncertainty regarding the transition of LEP students.

As mentioned previously, the schools chosen for this study are diverse in terms of their respective population, but they share a number of characteristics:

- . Inclusion of native bilingual, ESL, and standard English teachers;
- . Elementary grade levels;
- . Diverse, non-English linguistic groups (X-Spanish, Chinese; Y-Portuguese, Haitian);
- . Differential staffing;
- . Diverse grouping and curricula;
- . Transitional bilingual programs.

Both the need to return large numbers of students from the mainstream classes to the bilingual programs and the findings of the teacher-needs survey revealed the need to establish a staff development program in each of the two districts. The primary goal of the NIE project, therefore was the staff development process in determining the transfer of children from native-language to English-based programs. The research design called for selecting schools which included a diversity of language groups.

### Research Strategy

#### Site Selection

Two elementary schools were selected as sites for the study, one from each of the districts. The H School, in district Y is located in a predominantly Portuguese community but also includes some Haitian students who are bused to school. The school's bilingual program concentrates on transitioning students into mainstream English classes by the third grade. Upon hearing of the NIE study, the school principal met with the principal investigator and asked that his school be included in the study. He cited the low success rate of the inservice program at his school and his concern about the open hostility between the native language teachers, ESL teachers, and teachers of English-dominant classes.

#### Establishing Conditions and Goals

From the earliest stages of the project, the principal investigator and the research associate saw as their primary responsibility the creation of a cooperative relationship among the school personnel. To help establish collegiality among diverse actors, they conducted individual interviews with all personnel involved in the project, during which they acknowledged individual objectives for the project. Later, at a group meeting the researchers revealed the individual objectives and showed how they could be linked together. By this process they not only recognized the importance of individual objectives, but also conveyed the message that in order to achieve their own objectives, the teachers had to interact with the larger school community.

After this initial stage-setting, a series of key processes were integrated to answer the research question of paramount importance to all parties: "How can children be more successfully transitioned from native language to standard English programs?" This was the common theme, flowing continuously throughout the project. It served to anchor, as well as guide, the interaction among all the participants in the project.

A plenary session convened by the principal investigator included many diverse school personnel--native language teachers, standard classroom teachers, school principals, classroom aides, district curriculum specialists, and bilingual program coordinators. The purpose for assembling the group was to help establish the collaborative frame of reference to facilitate integration of the bilingual teachers into the larger school community.



The consensus of the group was that "a relevant and useful" teacher inservice plan for dealing with students with limited English proficiency was needed at both schools. How to do the research necessary to come up with a good staff development program was discussed. The principal investigator described the nature of interactive research and how they, as teachers, could collaborate with the research specialists in all phases of the effort.

#### Internal Social Stability and External Value Sharing

Less than one week later, the principal investigator conducted individual interviews with all the teachers. The main purpose of these sessions was to recognize personal needs and clarify the individual's real, versus espoused, values. This was a delicate procedure because each person had to be treated gently and tactfully. Strong support must be given to the feelings and ideas held by each teacher, no matter how vague they appeared. When the teachers began to feel recognized as important contributors to the total school organization, an essential social stability was being constructed at each school.

As the interviewing progressed, it became apparent that there was a lack of academic reciprocity between programs in the same school. Bilingual and regular classroom teachers prided themselves on "collegial" relationships within their own groups, but they admitted that there was very little inter-group interaction. However, all of the teachers acknowledged that students were not moving successfully from native language classes, through English-as-a-second language classes, to standard English classes. The bilingual teachers admitted that they had very little information about the programmatic goals of the classes into which they were passing students. Standard English teachers expressed a sense of frustration working with children who were not adjusting academically or socially. Teachers were especially disappointed when students who had done exceedingly well in native-language classes did not continue to do well in standard English classes.

After the individual interviews, the principal investigator listed all the various needs expressed by the teachers. Follow-up meetings were held separately with all the teachers of each group. General areas of concern began to emerge:

- a need for effective cognitive, affective, and social teaching strategies;
- a need for transition criteria;
- a need to develop some kind of instrument across all the programs that would check the entry-exit readiness of children;
- a need for child-centered program.

By adopting a child-centered approach, teachers were encouraged to define objectives from a unified perspective. In seeking to solve the problem of student transition, the teachers began to provide each other with information on teaching strategies, in addition to academic and social programmatic goals. Thus, in defining goals, the emphasis was placed on solving the problem rather than on blaming each other for the failure to transition children successfully.



### Patterned Interactive Teams

Teachers were asked to work with the principal investigator and research associate to develop a research design that would conform to established goals. A substantial number of teachers from all three programs (bilingual, ESL, standard English) volunteered. The teachers were then divided and assigned to teams, called "Patterened Interaction Teams." Five teams, of six people each, emerged. Members of each team were grouped according to interests, skills, knowledge, ability and grade level of teaching. A typical interactive team was composed of two bilingual teachers, a standard English teacher, an ESL teacher, a researcher, and a principal. The teams, which met weekly for about ten weeks, were called "patterened" because an effort was made to include a cross section of participants. To the extent they functioned as units, the teams were "interactive." Each group was assigned the task of defining teaching strategies in the cognitive, affective, and social domains of language, and to come up with methods and types of teacher feedback to students. These were to be derived from observable teaching behaviors.

### Task Orientation

An important feature of the collaborative research at this juncture, was the teachers' and researchers' concentration on function, rather than role. Thus, a strong relationship between researcher and practitioner began to evolve naturally, one in which the researcher did not automatically assume the dominant role at the top of a hierarchy. An order emerged based on expertise, not role. While the practitioner's expertise in defining instructional objectives was acknowledged, the researchers skills in organizing the data was equally acknowledged. All during the planning stage for developing the research instruments, the principal investigator reinforced the message that the usual hierarchical way of doing things was to be replaced by the principle that each task was going to be completed by the person with the most expertise, regardless of role.

### Tangible Outcomes

The Patterened Interactive Team's primary task of defining teaching methods and feedback, evolved toward a clear need to construct two instruments. The development and use of these instruments enabled the teachers and other school personnel to engage in skills directly related to educational research.

#### 1. LIN-VEN Language Observation Scale

This scale of language use was developed as a consequence of the need to observe classroom interaction systematically. The instrument can be used to measure verbal interaction. It focuses on three functional uses of language: Cognitive, Affective, Social. An important concept, on which this instrument is based, is that the teacher is the key figure in the classroom. Accordingly, the formulation of precise objectives by the teacher in order to give children opportunities to express themselves is necessary. These objectives are not measured on the instrument as discreet events, but

as "instructional chains" of verbal interaction. The instrument records each interaction in terms of links which make up the chain. The links:

- . Initiator
- . Teacher Objectives
- . Direction of Flow
- . Physical Method
- . Language Method
- . How Student Uses Language Opportunity
- . Feedback from Teacher
- . Continued Interaction

Proper use of the LIN-VEN instrument reveals how a student makes use of language opportunities. Research on language acquisition indicates that practice is crucial. Selinger (1977) defines practice as "any verbal interaction between the learner and the teacher, or learner and others in the learning situation." Practice takes place whenever the teacher leads the student to respond verbally. Chains that extend discourse allow more practice to take place. The utility of the LIN-VEN scale is that it can measure practice by the number of chains that result in extending discourse. Although the scale focuses on teacher-initiated interactions, a frequency count may also be taken of students' initiated interactions; following the premise that students who initiate an interaction, evoke a concomitant input from others and gain more opportunities for practice. The teacher's feedback to the student either encourages or discourages continued linguistic interaction. The following example is excerpted from the final report:

Example 1. Cognitive Chain:

(Code #)

- 15 . Teacher Objective (cognitive):  
identifies or labels:  
"What is the capitol of California?"
- 2 . Direction:  
to group
- 1 . Method Physical:  
context-oriented (question related to  
the social studies lesson)
- 3 . Method Language:  
questioning
- 17 . How Student Uses Language Opportunities:  
Identifies or labels  
"Sacramento"

16 . Feedback from Teacher:  
"yes"

2 . Continued Interaction:  
stops

This was a very common chain. The teacher's response, "yes", terminated the interaction. Feedback, such as asking for more information ("Tell me more about Sacramento"), would have extended the interaction and given the student more opportunity to practice the language.

Example 2. Affective Chain:

(Code #)

- 15 . Teacher Objective (affective)  
to elicit expressions of feelings:  
"How do you feel about what you did in  
school today?"
- 2 . Direction:  
to group
- 1 . Method Physical  
context-oriented (discussion of feelings  
was related to the story)
- 3 . Method Language:  
questioning
- 17 . How student uses Language Opportunities  
Expresses feelings: "I had a terrible day"
- 16 . Feedback from teacher:  
rejects  
"I don't want to hear that!"
- 2 . Continued Interaction:  
stops

## 2. Entry-Exit Checklist

A second product, developed in collaboration, came about as a direct consequence of teachers having to confront the issue of how to move students successfully across three language programs. One of the most acute problems facing the teachers in both schools was not knowing how much the students had learned previously and what to start with to provide proper instruction for the student. Again, working together, the principal investigator and the teachers constructed a "grade level entry-exit checklist." This instrument displays a continuum of skills in each of the following language areas: receptive, expressive, functional, social, affective, reading, and writing. The skills are sequenced according to developmental acquisition. Teachers from all three instructional programs helped the principal investigator develop test items for each skill. They developed a simple, yet practical tool by which teachers could base their

instructional methods and skills across the three domains (native language, ESL, standard English).

Planned comparisons were employed to test answer specific probes relating to instructional objectives, methods, feedback, and continued student-teacher interaction. Five general questions were posed:

- . How do native language, ESL, and standard English classrooms compare in terms of amount of item spent in each of the language areas: Cognitive, Affective, Social?
- . Which programs have more child-initiated interactions?
- . How do primary grades (K-3) in all three programs compare with standard English programs?
- . What types of teacher feedback result in continued linguistic interaction between teacher and student or student and peers?

From these general questions, thirty-one specific probes were framed. These probes pertained to the instructional process in all three programs. Answers to these questions were obtained by correlational analysis. Chi Square analysis was used to examine differences between programs. However, the primary aim of this analysis was not testing significance, but an attempt to observe and record what goes on in the classroom. Classroom observations were coded by observers (researcher and teacher) paired by language group using the LIN-VEN Language Observation Scale.

The teachers were first trained to use video tape to code on the observation scale. This initial training was followed by classroom visitations for one week. A total of 24 teachers (at this point functioning as research assistants) coded classroom observations in pairs. In a five-month period, these pairs collectively made over six thousand classroom observations in sixty-two classrooms across school sites. Observations were equally divided between native language, ESL, and standard English classrooms. Five million instructional chains were collected. Classroom visitations usually lasted between fifteen to thirty minutes. An effort was made to observe classrooms during presentations of different subject areas.

The principal investigator met with the research assistants (teachers) once per week. At these meetings, classrooms schedules were distributed and any problems dealing with coding were addressed. With continuous input from the teachers, the LIN-VEN Scale was revised twenty times before a final version was used for coding.

It is not within the scope of this document to present a comprehensive analysis of the data generated by all thirty-one probes. The reader is directed to the project's final report for a thorough analysis and discussion. However, a cursory look at the development of two questions to acquaint us with the analysis protocol, is in order here.

Probe (1): "What is the percentage of teacher objectives that occur in the cognitive, affective, and social areas of each program (native language, ESL, standard English)?"

Results: Application of the LIN-VEN instrument revealed that in native language classrooms, 53 percent of the teachers' were in the cognitive domain, while 48 percent were in the socio-affective domain. In ESL classroom, 97 percent were cognitive, 3 percent were socio-affective. Standard English classes indicated that 86 percent of the teachers' objectives were cognitive, 14 percent were socio-affective.

Analysis: The analysis of teaching objectives, vis-a-vis probe (1) indicates that there was weak continuity in teaching objectives across the three programs. The greatest hiatus was between native language and ESL classrooms, although ESL programs were supposed to bridge the gap between native language and standard English. There is a difficult adjustment for children going from classrooms where the teacher's objectives are balanced between cognitive and socio-affective usage to highly cognitive-oriented ESL and standard English classrooms.

Probe (2): "Who initiates most of the interactions in each programs?"

Results: In native language classrooms, 32 percent of the verbal interactions between student and teacher were initiated by the student. In ESL classrooms, 6.3 percent of the interactions were student-initiated, and in standard English classes, 4.8 percent. The greatest percentage of child-initiated interaction, 45.3, percent occurred in Chinese classrooms, as compared to 17.2 percent for Spanish, 26.8 percent for Portuguese, and 31.1 percent for Haitian classrooms.

Analysis: A marked discontinuity between native and English classrooms, was noted. Students who seemed to be encouraged in native language classrooms to initiate verbal interaction, are transitioned into classrooms where they are expected to sit passively, listen, and respond to teacher-initiated interactions.



## Findings

### Educational Program

Analysis of the data generated by six thousand classroom observations, including five million chains, revealed serious discontinuities in the educational programs for limited English proficient students in both schools. Discontinuity occurred across all links of the instructional chain. A look at the first three links serves to illustrate:

Link (1) Initiator:

One third of the verbal interactions in native language classrooms were student-initiated, as opposed to only 4.3 percent in English-dominant classrooms. Not much opportunity is given students to become involved in setting the direction of the verbal exchange.

Link (2) Teacher Objectives:

Native language classes had an almost equal split between instructional time spent on cognitive (53 percent) and socio-affective (48 percent) teaching objectives. Analysis indicated that in the ESL and standard English program most of the emphasis was in the cognitive domain. ESL classes spent 97 percent of the time on cognitive teaching objectives and only 3 percent in socio-affective. Standard English classrooms spent 86 percent of the time in cognitive and 14 percent in the socio-affective area.

Link (3) Direction of Flow:

The native language classes directed most of the language interactions to individual students rather than the group. ESL and standard English were group-oriented. This indicated that children who are accustomed to individualized instruction in native language programs experience an abrupt change when they are passed to ESL classes which do not provide this type of instruction.

As a result of the general discontinuity across programs, the transitional process is rendered more difficult for LEP students. The greatest shock to children came as they went from native language to ESL instruction. The marked differences in teaching emphasis and approach cause students to spend much time in adjustment. Differences were also found across programs in language skill sequence. It was observed that many teachers were "re-inventing the wheel." They were teaching the same concept all over again in all three programs. This became quite apparent to teachers as they worked with the Entry-Exit Checklist. A more continuous flow of instructional chains across all three programs would result in smoother transition for students and would help to establish the communication between programs so necessary for an integrated instructional program.

There is mounting evidence that unity among teachers is a good indicator of a healthy school. J.W. Little (1981), for example, in a recent study related to school success and staff development in urban schools, believes that school improvement is achieved when teachers engage each other in frequent and continuous talk about teaching practice.

In schools with a large number of limited English proficient students, which are forced by necessity to incorporate bilingual and ESL components into their instructional programs, the tendency toward fragmentation and staff isolation may be great. To what extent this occurs in all schools, is not known. This was certainly the case in this site, as we have seen. The coalescence of the teaching staff at both schools was an important outcome of the project.

".... the fact that the NIE project has brought together the teachers in monolingual and bilingual classrooms into a close working relationship has enabled the teachers to recognize each other's concerns and to come to an understanding of each others problems. This recognition has benefited greatly the children of (X) school."

\_\_\_\_\_  
communication,  
Principal, X School, to  
Principal Investigator.

#### Process/Product

Two tangible products were developed collaboratively and used effectively: the LIN-VEN Language Scale, and the ENTRY-EXIT Checklist. These two instruments appear to have had a major impact on the schools involved in the study. Their development was not merely a theoretical endeavor, but a practical solution to the abiding need of the teachers to make sense out of what occurred in their classrooms.

The principal of X School at a meeting with his school board, in the fall of 1981 (one year after project ended) said:

"The collaborative effort of the bilingual teachers research project has had two important outcomes: First, and most significant, it has resulted in collegial relationships across the programs. Secondly, the teaching observation scale and the entry-exit checklist have directly caused major programmatic changes which have already been noted to be of positive benefit to the children."

\_\_\_\_\_  
Principal,  
(X) School

The development of the instruments also has had a profound influence on how the teachers began to see education research in general, and laid to rest some of the mystique it has for many elementary teachers:

".... learning how to use the LIN-VEN gave me a whole new way of looking at what research is all about. It also changed the way I look at my classroom."

\_\_\_\_\_  
Teacher, 5th grade  
(Y) School

The majority of the participants in both school sites felt much the same way as this teacher. There was strong agreement that both the collaborative research process and the development of tangible products of mutual benefit were crucial to the success of the project. In telephone conversation with this writer, the Bilingual Program Director (X School), remarked that in her opinion, the two most important elements in the project were the collaborative process and the development of the instruments. She felt that the collaborative research process would not have had the impact for change in the school without the development of the instruments, just as without the collaboration, the products would not have been so instrumental in forging the "togetherness" of the teachers that was necessary for constructing the instruments.

#### Transferability

The project was also successful in establishing a framework for the research efforts at one school to be transferred to other schools. The collaborative research process, including the instruments, have been successfully transferred to other schools in the two districts. Approximately one year after the beginning of the project, according to the principal investigator, bilingual education teachers in elementary schools throughout the district were meeting bi-monthly to collaborate on the development of entry-exit language check lists for grades 2-8. Some of the teachers from X School were attending these meetings and functioning as "peer consultants." Thus, in terms of inservice education, it appears that a group of teachers, who participated actively in all phases of a research project, learned enough to function as inservice staff and felt confident enough to counsel other teachers of LEP students. This development seems to reinforce the idea that "hands on" research and problem-solving is the best type of staff development.

### III. CONCLUSIONS

A number of significant lessons, that are relevant to other school communities serving large numbers of limited English proficiency students, emerged from this study. Despite diversity of contextual variables and the unique experiences of the principal actors in each project, dictate caution in considering direct application of our findings to other settings. The four projects shared a number of antecedents that were instrumental in setting the conditions for the evolution of each project:

- . considerable soul-searching on the part of classroom teachers and other practitioners in the school district regarding the efficacy of the instructional program for students of limited English proficiency, especially the progress of these students in the regular school program;
- . agreement that quality of teaching was a major variable in the instructional program;
- . acknowledgement that the school district's inservice education plan for teachers of LEP students needed improvement or overhaul;
- . agreement that research done locally can be used to develop a better inservice plan; and
- . agreement on the part of the school people to work closely with researchers with whom there had been a history of mutual trust.

Our first conclusion is that readiness appeared to be a fundamental predisposition to successful implementation of the research strategy. This was illustrated in site D, where a needs survey prior to commencement of the project revealed that the single, most pressing concern of 90 percent of the teachers, was establishment of reliable transition criteria for LEP students. Once a problem is identified by a majority of a school's staff, a school community is ready to enter into a collaborative relationship with researchers.

A second conclusion, derived from examination of the unfolding of each project, is that the collaborative research process appeared to progress in stages. These stages require clearly defined behavior on the part of the researchers. Although, the sequence is not "lock-step", and there may be considerable overlap, the stages may be generally described in the following way:

#### Early

The early stage sets the tone for the entire period; therefore, it is highly important. During this time, a series of meetings should be held involving researchers, teachers, and as many members of the school staff as possible. Key elements of the early stage are orientation and full

discussion of the collective needs of the school. After the plenary session, it is important that the researchers take sufficient time to meet individually with as many members of the school staff as possible, and engage them in discussion of their individual needs. These semi-structured interviews should be designed to provide nurturing and acceptance of the teacher's perspectives.

At this stage many of the teachers are reluctant to frankly discuss their concerns. It is crucial that the teachers be recognized during these interviews as important contributors to the total school program and organization, so that they will feel like insiders not outsiders in the change process. Once this is accomplished, an internal social stability within the school can be developed. This is especially important in bilingual programs because, as we have seen, in some schools bilingual programs become segregated from the whole school and teachers feel isolated and alienated.

#### Middle

At mid-stage, the researcher attempts to consolidate previous elements. Another meeting is held with the whole group. During this meeting, the researcher shares results of the individual sessions. Extreme care must be taken not to divulge private opinions held by the teachers regarding the school or its administrative staff. Instead, it should focus on the similarities of needs across programs. The middle stage should achieve the following:

- . setting of external value-sharing and common goals;
- . definition and clarification of the group's tasks, all participants in each area must know what their specific tasks are;
- . development and revision of research design in keeping with the practitioners' frame of reference;
- . collaborative development of necessary instruments; and
- . building of feedback mechanism into the procedure and its use for self-correction.

#### Late

During the later stages of the collaboration process, sound data collection procedures are solidified. The following should be pursued:

- . checking of the validity and reliability of the instruments;
- . analysis of data and general agreement on its significance;
- . syntheses of findings and utilization of those findings in designing the inservice plan;



- . dissemination of the plan across the school;
- . formative evaluation procedures to be incorporated into the school's staff development program.

A third lesson derives from the experiences of the teachers in sites C and D: the importance of teachers working actively in the actual construction of research instruments. As we observed in site C (school V), the development and subsequent revisions of a questionnaire, as well as interviews with parents, contributed much to the research in School V, the most successful of all the projects in that site.

In site D, the creation of two concrete instruments was considered by many of the participants to be one of the most consequential aspects of the project. In this project, the collaborative development of the LIN-VEN Scale and the Entry-Exit Checklist, led to a high degree of collegiality among the participants. These two instruments came to represent concrete evidence of the entire group's work (which they viewed with pride), and thus established a direct measure of the success of the collaborative process.

Development of the instruments, and more importantly, their successful use served as a point of departure for continued collaboration. This was the case in site D, school district Y, where at the end of the project the teachers felt confident enough to share the instruments and skills they had developed with other elementary schools in the district. Their sharing assured the continuation of the collaborative process, as teachers throughout the district proceeded to develop language skill entry-exit checklists for all grades in their own instructional program.

The construction and use of instruments as integral parts of the collaborative research process also led to another highly important engagement of teachers: classroom observation. In cases where the research design called for the teachers to collect data by systematically observing and recording what went on in their colleague's classrooms, the teachers became more thoughtful and reflective about what was occurring in their own classrooms. By learning to do careful investigations of their own and other teachers' instructional strategies, bilingual education teachers become important agents in revealing the context in which bilingual instruction. In addition, they, instead of others, can best reveal the complexity of bilingual instruction. In addition, they, instead of others, can best reveal the complexity of ESL classroom dynamics. These teachers can then serve as instructors for researchers who are not familiar with, or appreciative of, the intricate dynamics of these classrooms. These teachers can also become key agents in developing inservice education programs which accurately reflect the day-to-day concerns of the teachers of LEP students and their long range needs. This occurred in sites A, B, and D, where inservice programs developed as a consequence of the collaborative relationship between researchers and practitioners, were firmly in place one year after the end of the study.

Research in site A and site D was more productive than site B. To what extent this was a function of grade level (A and D took place in elementary schools, B took place in secondary schools), is not known. As we have demonstrated, the scope of work attempted by the teachers in site B was overly ambitious and complicated. The researchers could not meet with the teacher research teams frequently enough, since the six schools were scattered over a wide geographical range. The teachers in these schools committed themselves to many different research problems, many of which were beyond their spheres of influence. The research problems in sites A and C, and more so in site D, were more precise. The teacher-researchers in site D coalesced around one primary research question which was framed in concise terms: how to establish reliable transition criteria for LEP students. Collaborative research appears to work better and be more productive when the research team focuses its efforts on precisely defined problems.

An additional lesson related to staff development. Participants in all four projects reported that they viewed the experience of participating in educational research, some for the first time, to have been the most productive staff development activity they had ever engaged in. When asked why this was so, their responses generally included the following:

- . their participation required them to be more objective about the whole instructional program at the school, not just their own domains;
- . they felt less isolated from their peers and more "together;"
- . they learned to "really look at" what is happening in the classroom;
- . they discovered that they could make intelligent assessments about teachers' instructional strategies;
- . they were surprised and pleased whenever the researchers asked them for information and opinions, especially in constructing and checking the observation instruments. They learned that sometimes the researcher's theoretical expertise is highly dependent on the teacher's practical knowledge.

The latter, contributed to the teachers feeling "more professional;" many felt for the first time, that they were more capable of contribution to the school or district's staff development program than outside consultants.

An important line of inquiry was addressed by the work done in site D. As discussed previously, the research focused on the placement of students and their passage through the school's instructional program. This focus is not an isolated, site-specific issue. Many of the teachers in all four of the projects, and those concerned with bilingual education in different parts of the country, have expressed their concern about how to know when NEP and LEP students are ready for passage along the instructional program. As we saw previously, in site B a group of teachers expressed their interest in doing research on why some LEP students seem to spend an

inordinate amount of time in ESL classes. Transition of students seems to be a universal concern in bilingual education.

As the purpose and nature of bilingual education are questioned by many educators, including those in bilingual education themselves, and as the current immigration of NEP populations continues to rise, a cogent bilingual education policy is greatly needed. To date, many states have based their bilingual education policy on different agendas. It is questionable whether any state has successfully promoted bilingual policy and practice based on how children learn a second language, and can effectively transitioned from their own primary language to English.

The principal investigator of the project in site D, a recognized expert in the field of second language acquisition and bilingual classroom dynamics, stated that the results of the NIE inservice study strongly suggest that bilingual education programs should eliminate nomenclatures causing them to be thought of as separate entities with different goals. She recommended that emphasis be placed on a continuous chain of instruction. Instead of labeling classed "native language," "bilingual," or "standard English"--as separate programs--all these programs could be grouped under the rubric, "language transitioning." Thus, native language teachers could collaborate with ESL and standard English teachers to develop skills in both language along a language skills continuum. Policy makers and administrators would find that elimination of program titles could be cost effective. In addition, the duplication of efforts by teachers, which is so prevalent, could be eliminated. Instead, teachers could work together to provide effective language development for all students of limited English proficiency.

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